Radiosonde Test Stand (RTS) Installation Instructions

Attachment I

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Office of Operational Systems
Field Systems Operations Center/Observing Systems Branch

Tools Needed

1 Rubber Mallet or Hammer
1 Power Drill with 9/16 socket

Package Contents

Bag containing 9 bolts/washers, 4 screws, and 2 hooks
2 PVC Halves
6 (4”x4”) x 2ft sections
1 (4”x4”) x 6ft section
1 (4”x4”) x 5ft section
Ground Spike

Radiosonde Test Stand (RTS) Assembly

1. When you unpack the Radiosonde Test Stand (RTS) you should have the pieces shown below in Figure 1 along with the Ground Spike and bag of bolts.

Figure 1 - Pieces of the RTS (minus Ground Spike and Bolts)

2. Put the pieces loosely together accordingly. All joints are labeled as to where they should be joined with one another (A goes with A, B goes with B...etc).

Figure 2 - Pieces of the RTS put together prior to bolting

3. When the pieces have been laid together, take out one of the bolts and by utilizing the rubber mallet, get the bolt started in the holes (See Figure 3).

Figure 3 - Using the Rubber mallet to get the bolt started in the holes.

4. Once the bolt has been started, use the power drill and the 9/16" socket to secure the bolt into place.

5. Repeat Steps 3 and 4 for all five of the bolts necessary to assemble the RTS.

6. When all bolts have been secured, the RTS should look like Figure 4.

Figure 4 - Partially assembled RTS

7. Once the Stand itself has been assembled, the exterior portions of the RTS can be constructed.

    a. Holes for the half slices of PVC have already been predrilled on both sides of the top of the RTS (Figure 5). The 4 screws provided will be used to secure these pieces.

Figure 5 - Attaching the PVC to the top of the RTS

b. Holes for the hooks have already been pre-drilled directly under the PVC on the crossbar of the RTS (Figure 6).

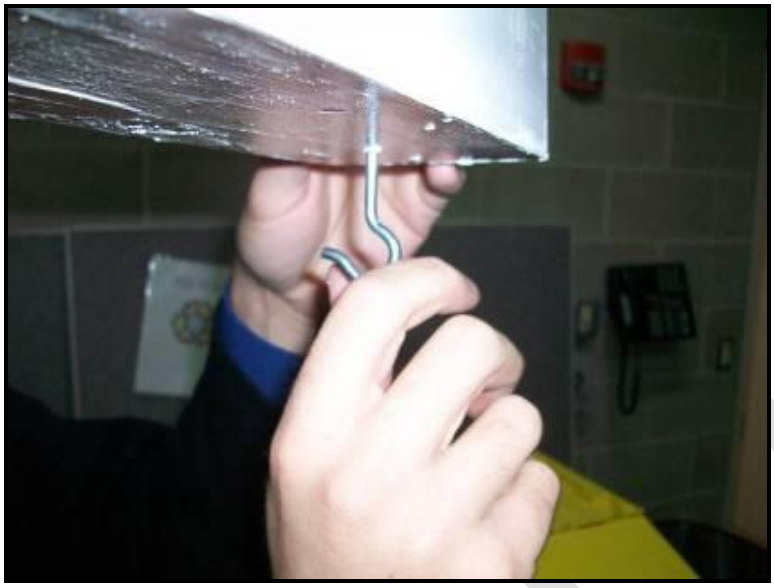

Figure 6 - Attaching the Radiosonde hooks to the bottom of the RTS crossbar

Radiosonde Test Stand Mounting Assembly

Depending your site's preference, there are two different methods for securing the RTS in the field. A mobile option is available, which allows sites to move the RTS throughout the year to adjust for the changing of the seasons and predominant wind directions. A permanent option is also available.

RTS Base Stand

1. If it is decided that your site would like to have the RTS more mobile, then the RTS base stand will need to be assembled.

Figure 7 - Legs of the RTS Base Stand

2. The base legs are designed in such a manner that they screw into the legs next to them along with the bottom of the RTS (Figure 8 - Figure 10).

Figure 8 - Predrilled holes in the side of the Base legs

Figure 9 - Pre-drilled hole at the top of the base legs

Figure 10 - Configuration of the base legs

3. When the pieces have been put together, take out one of the bolts and by utilizing the rubber mallet, get the bolt started in the holes (See Figure 11).

Figure 11 - Using the Rubber mallet or hammer to get the bolt started in the holes.

4. Once the bolt has been started, use the power drill and the 9/16" socket to lightly secure the bolt into place (Do not fully tighten these bolts until all the pieces have been put into place).

5. Repeat steps 3 and 4 to put together three of the four base legs together.

6. When three of the base legs have been put together, place the bottom of the RTS into the opening that has been formed in the middle of the base legs (See Figure 12).

Figure 12 - Place the RTS in the middle of the base stand.

7. When the pieces have been put together, take out one of the bolts and by utilizing the rubber mallet, get the bolt started in the holes to secure the base stand to the RTS.

8. Attach the forth leg of the base stand to the rest of the RTS and start the bolts using the rubber mallet or hammer

9. Once all pieces have been put into place and all bolts started, tighten all bolts by using the power drill and the 9/16" socket (See Figure 13).

Figure 13 - Secure and tighten all bolts with the drill

Figure 14 - Finished RTS with Base Stand

Ground Spike

1. If a more permanent option is desired, then the supplied Ground Spike should be utilized.

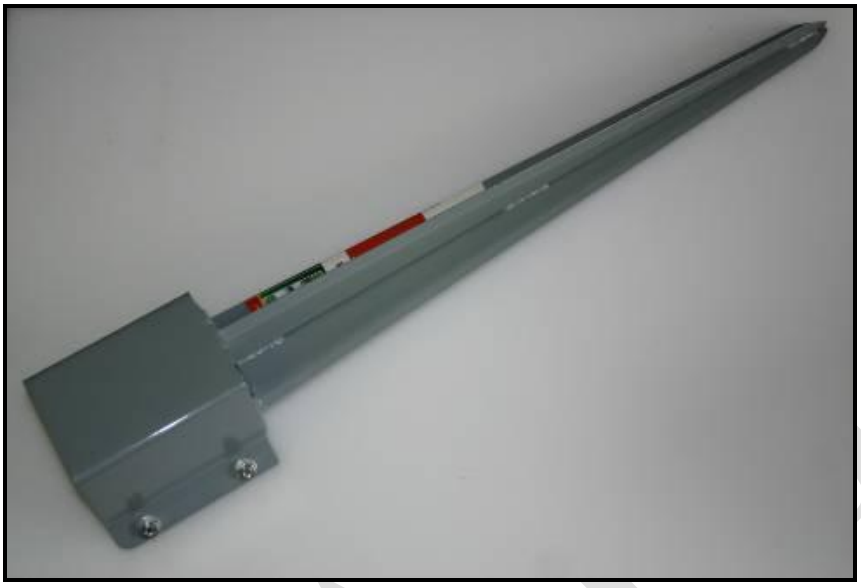

Figure 15 - RTS Ground Spike

2. First decide on the location of the RTS in respect to the launch area. Ensure that the ground spike will not come in contact to any cables when it is placed into the ground.

3. Utilizing one of the 4"x4" pieces used for the RTS Base Stand, place the piece into the base of the ground spike and secure it.

4. Using a sledge hammer, pound the ground spike into the ground until the base of the spike is still barely visible.

5. Replace the 4"x4" piece of wood with the actual RTS (6ft section).

6. Using the sledge hammer once again along with a spare piece of wood, pound the top of the RTS to drive the spike further into the ground until it no longer wobbles and the RTS is secure in the ground.

Figure 16 - RTS Deployed with ground spike